

WHAT IS CLAIMED IS:

1. A method for manufacturing nitride light-emitting device, comprising the following steps:
providing a nitride lighting structure and a second substrate, the nitride lighting structure further comprising:
a first substrate made of aluminum oxide;
an N-type nitride epitaxial layer formed on the first substrate; and
a P-type nitride epitaxial layer formed on the N-type nitride epitaxial layer;
forming a first bonding layer on the P-type nitride epitaxial layer of the nitride lighting structure;
forming a second bonding layer on the second substrate, which is made of a semiconductor or a metal or an alloy;
fixing the first bonding layer and the second bonding layer together;
removing the first substrate of the nitride lighting structure to expose the N-type nitride epitaxial layer of the nitride lighting structure;
forming a transparent conductive layer on the N-type nitride epitaxial layer;
forming an N-type electrode on the transparent conductive layer; and
forming a P-type electrode on the second substrate.
2. The method according to Claim 1, wherein the first bonding layer is made of any of or any combination of aluminum, silver, gold, nickel, copper, platinum, titanium and palladium.
3. The method according to Claim 1, wherein the first bonding layer has a thickness of 1 μ m.
4. The method according to Claim 1, wherein the first bonding layer is formed by depositing or sputtering or plating.
5. The method according to Claim 1, wherein the thermal conductivity coefficient of the second substrate is larger than 150W/m-K.

6. The method according to Claim 1, wherein the second substrate is made of aluminum.
7. The method according to Claim 1, wherein the second bonding layer is made of any of or any combination of aluminum, silver, gold, nickel, copper, platinum, titanium and palladium.
8. The method according to Claim 1, wherein the second bonding layer has a thickness of 1 μ m.
9. The method according to Claim 1, wherein the second bonding layer is formed by depositing or sputtering or plating.
10. The method according to Claim 1, wherein the first bonding layer and the second bonding layer are fixed face to face with a clamp and then bonded.
11. The method according to Claim 10, wherein the first bonding layer and the second bonding layer are bonded together at a temperature of 300°C with a pressure of 4kg/cm².
12. The method according to Claim 1, wherein the first substrate is removed by chemical etching or dry etching or mechanical abrading.
13. The method according to Claim 1, wherein the transparent conductive layer is made of any of or any combination of indium oxide, tin oxide, indium-tin oxide, zinc oxide, indium-zinc oxide, conductive nitride and magnesium oxide.